B. AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for managing extended attribute data, said method comprising:
identifying a data area in a data space to store attribute data, wherein the data space includes an inline page and one or more outline pages;
storing the attribute data in the identified data area; and
marking one or more bits in a bitmap corresponding to the data space, wherein the marked bits correspond to the identified data area.

2. (Original) The method as described in claim 1 further comprising:
storing an extended attribute type, a size, and an offset in an extended attribute directory.

3. (Cancelled)

4. (Currently Amended) The method as described in claim ~~3~~ 1 wherein the inline page and the outline pages each have a corresponding bitmap.

5. (Original) The method as described in claim 1 further comprising:
receiving an extended attribute type and the attribute data;
calculating a number of lines needed to store the attribute data in the data space, wherein the data space includes an inline space and one or more outline spaces;
analyzing a bitmap corresponding with the inline space to determine whether the calculated number of lines are

available in the inline space to store the attribute data; and

storing the attribute data in one or more lines included in the inline space in response to the analysis determining that the number of lines are available.

6. (Original) The method as described in claim 5, wherein the data space includes one or more outline data spaces, the method further comprising:

analyzing one or more outline bitmaps, each of the outline bitmaps corresponding with one of the outline data spaces, to determine whether the calculated number of lines are available in any of the outline spaces to store the attribute data; and

storing the attribute data in one or more lines included in at least one of the outline spaces in response to the analysis of outline bitmaps determining that the number of lines are available in at least one outline data space.

7. (Original) The method as described in claim 1 further comprising:

receiving a retrieval request from a requestor for an attribute stored in the data space;

identifying an offset and a length in an extended attribute directory corresponding to the requested attribute;

calculating a number of lines based on the identified length;

retrieving the calculated number of lines from the data space beginning at the offset; and

providing the calculated number of lines to the requestor.

8. (Original) The method as described in claim 7 further comprising:

calculating a last line length corresponding to a last line retrieved based on the length; and

truncating the last line based on the last line length prior to the providing.

9. (Original) The method as described in claim 1 further comprising:

receiving a deletion request for an attribute stored in the data space;

locating an attribute offset and an attribute length in an attribute directory corresponding to the deletion request;

calculating a number of lines based on the attribute length;

identifying a stored data area based on the attribute offset and the calculated number of lines;

resetting one or more bits corresponding to the identified stored data area in the bitmap, wherein the resetting indicates that the corresponding data area is available for storing of a new attribute.

10. (Original) The method as described in claim 1 further comprising:

receiving a modification request for an attribute stored in the data space, the request including a modified attribute data;

locating an attribute offset and an attribute length in an attribute directory corresponding to the modification request;

calculating a stored number of lines based on the attribute length and a needed number of lines based on the modified attribute data;

identifying a current storage location within the data space based on the attribute offset and stored number of lines;

comparing the stored number of lines with the needed number of lines, in response to the comparing:

replacing the stored attribute data with the modified attribute data in the identified current storage location in response to the stored number of lines equaling the needed number of lines;

resetting one or more bits corresponding to the identified current storage location in the bitmap, wherein the resetting indicates that the corresponding data area is available for storing of a new attribute, in response to the stored number of lines being greater than the needed number of lines;

relocating the modified attribute data to a different data area response to the stored number of lines being less than the needed number of lines and determining that there is an insufficient number of unused lines following the current storage location to store the modified attribute data; and

appending the modified attribute data to one or more lines following the current storage location in response to the stored number of lines being less than the needed number of lines and determining that there are a sufficient number of unused

lines following the current storage location to store the modified attribute data.

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Currently Amended) A computer program product for managing extended attribute data, said computer program product comprising:

means for identifying a data area in a data space to store attribute data, wherein the data space includes an inline page and one or more outline pages;

means for storing the attribute data in the identified data area; and

means for marking one or more bits in a bitmap corresponding to the data space, wherein the marked bits correspond to the identified data area.

22. (Original) The computer program product as described in claim 21 further comprising:

means for storing an extended attribute type, a size, and an offset in an extended attribute directory.

23. (Cancelled)

24. (Currently Amended) The computer program product as described in claim ~~23~~ 21 wherein the inline page and the outline pages each have a corresponding bitmap.

25. (Original) The computer program product as described in claim 21 further comprising:

means for receiving an extended attribute type and the attribute data;

means for calculating a number of lines needed to store the attribute data in the data space, wherein the data space includes an inline space and one or more outline spaces;

means for analyzing a bitmap corresponding with the inline space to determine whether the calculated number of lines are available in the inline space to store the attribute data; and

means for storing the attribute data in one or more lines included in the inline space in response to the analysis determining that the number of lines are available.

26. (Original) The computer program product as described in claim 25, wherein the data space includes one or more outline data spaces, the computer program product further comprising:

means for analyzing one or more outline bitmaps, each of the outline bitmaps corresponding with one of the outline data spaces, to determine whether the calculated number of lines are available in any of the outline spaces to store the attribute data; and

means for storing the attribute data in one or more lines included in at least one of the outline spaces in response to the analysis of outline bitmaps determining that the number of lines are available in at least one outline data space.

27. (Original) The computer program product as described in claim 21 further comprising:

means for receiving a retrieval request from a requestor for an attribute stored in the data space;

means for identifying an offset and a length in an extended attribute directory corresponding to the requested attribute;

means for calculating a number of lines based on the identified length;

means for retrieving the calculated number of lines from the data space beginning at the offset; and

means for providing the calculated number of lines to the requestor.

28. (Original) The computer program product as described in claim 27 further comprising:

means for calculating a last line length corresponding to a last line retrieved based on the length; and

means for truncating the last line based on the last line length prior to the providing.

29. (Original) The computer program product as described in claim 21 further comprising:

means for receiving a deletion request for an attribute stored in the data space;

means for locating an attribute offset and an attribute length in an attribute directory corresponding to the deletion request;

means for calculating a number of lines based on the attribute length;

means for identifying a stored data area based on the attribute offset and the calculated number of lines;

means for resetting one or more bits corresponding to the identified stored data area in the bitmap, wherein the resetting indicates that the corresponding data area is available for storing of a new attribute.

30. (Original) The computer program product as described in claim 21 further comprising:

means for receiving a modification request for an attribute stored in the data space, the request including a modified attribute data;

means for locating an attribute offset and an attribute length in an attribute directory corresponding to the modification request;

means for calculating a stored number of lines based on the attribute length and a needed number of lines based on the modified attribute data;

means for identifying a current storage location within the data space based on the attribute offset and stored number of lines;

means for comparing the stored number of lines with the needed number of lines;

in response to the comparing:

means for replacing the stored attribute data with the modified attribute data in the identified current storage location in response to the stored number of lines equaling the needed number of lines;

means for resetting one or more bits corresponding to the identified current storage location in the bitmap, wherein the resetting indicates that the corresponding data area is available for storing of a new attribute, in response to the stored number of lines being greater than the needed number of lines;

means for relocating the modified attribute data to a different data area response to the stored number of lines being less than the needed number of lines and determining that there is an insufficient number of unused lines following the current storage location to store the modified attribute data; and

means for appending the modified attribute data to one or more lines following the current storage location in response to the stored number of lines being less than the needed number of lines and determining that there are a sufficient number of unused lines following the current storage location to store the modified attribute data.

31. (Cancelled)

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Cancelled)